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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/722,313

11/25/2003

Henry Hsu

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12/27/2004

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER

KOSLOW, CAROL M

ART UNIT

PAPER NUMBER

1755

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/722,313

Applicant(s)

HSU ET AL.

Examiner

C. Melissa Koslow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 12, 14-17 and 20-46 is/are rejected.
- 7) ☒ Claim(s) 10, 13, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/24/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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The German and French language patents in the information disclosure statement filed 24 May 2004 fails to comply with 37 CFR 1.98(a)(3) because they do not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. They have been placed in the application file, but the information referred to therein has not been considered.

The German language WO patents have been considered with respect to the provided English abstracts.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: None of the reference numbers are given in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

37 CFR 1.84(p)(5) appears to require the reference numbers in the drawings to actually be present and defined in the specification. Thus applicants it appears cannot use incorporation

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by reference to define the reference numbers of figures 1 and 2. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: There is no teaching in the specification that combinations of carrier fluids can be used, as claimed in claims 8 and 28. There is no teaching in the specification that the carrier fluid is a mixture of PFPEs, as claimed in claims 9 and 29. There is no teaching in the specification of using combinations of the listed functional groups, as claimed in claims 12 and 32. The specification teaches on pages 2, 3 and 5 that the functional group is one of those listed in the claims.

Claims 12 and 32 are objected to because of the following informalities: The comma between “amine” and “dihydroxyl” is missing. Appropriate correction is required.

Claims 20-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The format of claim 20 makes unclear as to what is being claimed, a magnetorheological fluid or a prosthetic knee comprising the magnetorheological fluid. If applicants meant to claim

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the fluid, the claim 21 does not further limit claim 20, since it is directed to the prosthetic and claims 22-38 are duplicates of claims 2-16, 18 and 19.

For the purposes of the art rejection, the Examiner is interpreting claims 20-46 as being to the fluid. If applicants change the claims to a prosthetic knee comprising the magnetorheological fluid, an election by original presentation restriction may be made.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 11, 12, 20-28, 31, 32 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/10281.

U.S. patent 6,780,343 is the translation of WO 02/10281.

This reference teaches a magnetorheological fluid comprising iron particles (col. 2, lines 45-47), a carrier fluid, such as silicones, hydrocarbons, mineral oil, ethers, esters and mixtures thereof (col. 3, lines 6-25), and as a dispersant, perfluoroether carboxylic acid salts (col. 3, lines 40-44). The fluid is used in dampers, shock absorbers, elevators and other devices which function over the range of 10-115°F, therefore the taught fluid is operable over the claimed temperature range. The taught iron powders have a particle size in the range of 0.1-100 microns (col. 2, lines 60-61), which overlaps the claimed ranges. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103. *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). The

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amount of iron particles is 10-90 wt%, which when converted to volume percent, would be expect to overlap the claimed ranges (col. 5, lines 9-11). The reference suggests and makes obvious the claimed fluid.

Claims 9, 14-17, 29, 34-36 and 40-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/10281 as applied to claims 1, 8, 20 and 28 above, and further in view of U.S. patent 5,382,373.

As discussed above, WO 02/10281 suggests the claimed fluid. It does not teach the carrier can be a perfluorinated polyether or the amount of perfluoroether carboxylic acid salt dispersant. Column 3, lines 6-9 teaches the carrier fluid can be any low vapor pressure oil, but is can be any carrier commonly known to be used for magnetorheological fluids. Column 4, lines 34-45 of U.S. patent 5,382,373 teach conventional carrier fluids for magnetorheological fluids. This section teaches those taught in WO 02/10281 and also includes perfluorinated polyethers. This would suggested to one of ordinary skill in the art that perfluorinated polyesters are functionally equivalent to those in WO 02/10281 and one of ordinary skill in the art would have found it obvious to use a perfluorinated polyether as the carrier fluids for the magnetorheological fluid of WO 02/10281. Perfluorinated polyethers have a viscosity range at 104°F, a viscosity index range at 104°F and 212°F, a pour point range and a percent volatility range at 212°F that overlaps the claimed ranges. U.S. patent 5,382,373 teaches the amount of dispersant added in magnetorheological fluids is 0.1-20 wt%, based on the weight of the particles (col. 6, lines 1-3), which when calculated as volume percentage based on the amount of dispersant and carrier, would appear to overlap the claimed range. One of ordinary skill in the art would have found it

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obvious to use this known amount of dispersant for the taught perfluoroether carboxylic acid salt dispersant in WO 02/10281. The references suggest the claimed fluid.

Claims 10, 13, 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

There is no teaching or suggestion in the cited art of record of a magnetorheological fluid comprising a mixture of parafluorpropene and an oxygen polymerized amide derivative or polyhexafluoropropylene epoxide having a carboxyl group located one the terminal fluoromethylene group.

The article by Carlson et al is cited as of interest since it teaches the damping element in a prosthetic knee comprising a magnetorheological fluid. The fluids taught by the references used in the above rejections are used in damping fluids.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached at (571) 272-1362.

The fax number for all official communications is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk
December 22, 2004


C. Melissa Koslow
Primary Examiner
Tech. Center 1700